What is claimed is:

1. An organic electroluminescent device which has at least one emitting layer (EML) which comprises a mixture of at least one hole conductor material and at least one emission material capable of emission, characterized in that at least one of the two materials comprises one or more spiro-9,9'-bifluorene units and the weight ratio of hole conductor material to emission material is from 1:99 to 99:1.

2. The organic electroluminescent device as claimed in claim 1, characterized in that the emitting layer (EML) comprises a mixture of at least one hole conductor material and at least one emission material capable of emission, the HOMO of the hole conductor material lying in the range from 4.8 to 5.8 eV (vs. vacuum) and the compound having at least one substituted or unsubstituted diarylamino group, a triarylamino unit or a carbazole moiety, and the emission material capable of emission containing one or more spiro-9,9'-bifluorene units and the weight ratio of hole conductor material to emission material being from 1:99 to 99:1.

3. The organic electroluminescent device as claimed in claim 1, characterized in that the emitting layer (EML) comprises a mixture of at least one hole conductor material and at least one emission material capable of emission, the HOMO of the hole conductor material lying in the range from 4.8 to 5.8 eV (vs. vacuum) and the compound containing one or more spiro-9,9'-bifluorene units and at least one moiety selected from substituted or unsubstituted diarylamino, triarylamino, carbazole or thiophene units, and the emission material capable of emission being selected from the group of the metal complexes, stilbenamines, stilbenarylenes, fused aromatic or heteroaromatic systems, but also the phosphorescent heavy metal complexes, rhodamines, coumarins, substituted or unsubstituted hydroxyquinolinates of aluminum, zinc, gallium, bis(p-diarylaminostyryl)arylenes, DPVBi (4,4'-bis(2,2-diphenylvinyl)biphenyl) and analogous compounds, anthracenes, naphthacenes, pentacenes, pyrenes, perylenes, rubrene, quinacridones, benzothiadiazole compounds, DCM (4-(dicyanomethylene)-2-methyl-6-(4-dimethylaminostyryl)-4H-pyran), DCJTB ([2-(1,1-dimethylethyl)-6-[2-(2,3,6,7-tetrahydro-1,1,7,7-tetramethyl-1H,5H-benzo[ij]quinolizin-9-yl)ethenyl]-4H-pyran-4-ylidene]propanedinitrile), complexes of iridium, europium or platinum, and the weight ratio of hole conductor material to emission material being from 1:99 to 99:1.

4. The organic electroluminescent device as claimed in claim 1, characterized in that the emitting layer (EML) comprises a mixture of at least one hole conductor material and at least one emission material capable of emission, the HOMO of the hole conductor material lying in the range from 4.8 to 5.8 eV (vs. vacuum) and the compound containing one or more spiro-9,9'-bifluorene units and at least one moiety selected from substituted or unsubstituted diarylamino, triarylamino, carbazole or thiophene units, and the emission material capable of emission comprising at least one spiro-9,9'-bifluorene unit

and the weight ratio of hole conductor material to emission material being from 1:99 to 99:1.

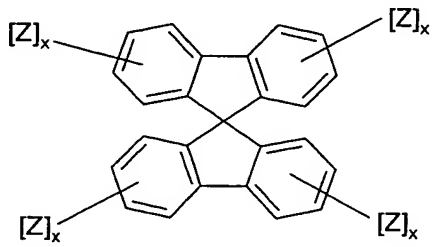
5. The organic electroluminescent device as claimed in one or more of claims 1 to 4, characterized in that the weight ratio of hole conductor material to emission material is from 5:95 to 80:20.

6. The organic electroluminescent device as claimed in one or more of claims 1 to 4, characterized in that the weight ratio of hole conductor material to emission material is from 5:95 to 25:75.

7. The organic electroluminescent device as claimed in one or more of claims 1 to 6, characterized in that the glass transition temperature T_g of the hole conductor materials is greater than 90°C.

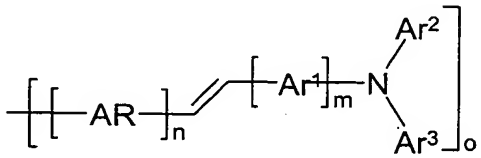
8. The organic electroluminescent device as claimed in one or more of claims 1 to 7, characterized in that the glass transition temperature T_g of the emission materials is greater than 100°C.

9. A compound of the formula (I)



Formel (I)
formula (I)

in which Z represents one or more groups of the formula



and in which the symbols and indices are:

AR, Ar^1, Ar^2 and Ar^3 are the same or different at each instance and are each aromatic or heteroaromatic cycles which have from 4 to 40 carbon atoms and may be substituted with substituents R^1 at the free positions;

n is the same or different at each instance and is 0, 1 or 2;

m is the same or different at each instance and is 1 or 2;

o is the same or different at each instance and is 1, 2, 3, 4, 5 or 6; where AR on Ar^2 or on Ar^3 or on both, may be bonded in the form of a dendrimer;

x is the same or different at each instance and is 0, 1, 2, 3 or 4, with the proviso that the sum of all indices x is unequal to zero,

R^1 is the same or different at each instance and is a straight-chain, branched or cyclic alkyl or alkoxy chain which has from 1 to 22 carbon atoms and in which one or more nonadjacent carbon atoms may also be replaced by N-R^2, O, S, -CO-O-, O-CO-O, where one or more hydrogen atoms may also be replaced by fluorine, an aryl or aryloxy group which has from 5 to 40 carbon atoms and in which one or more carbon atoms may also be replaced by O, S or N and which may also be substituted by one or more nonaromatic R^1 radicals, or Cl, F, CN, $N(R^2)_2$, $B(R^2)_2$, where two or more R^1 radicals may also form an aliphatic or aromatic, mono- or polycyclic ring system with one another;

R^2 is the same or different at each instance and is H, a straight-chain, branched or cyclic alkyl chain which has from 1 to 22 carbon atoms and in which one or more nonadjacent carbon atoms may also be replaced by O, S, -CO-O-, O-CO-O, where one or more hydrogen atoms may also be replaced by fluorine, an aryl group which has from 5 to 40 carbon atoms and in which one or more carbon atoms may also be replaced by O, S or N and which may also be substituted by one or more nonaromatic R^1 radicals.

10. The use of the compounds as claimed in claim 9 for producing organic electroluminescent devices.

11. The organic electroluminescent device as claimed in one or more of claims 1 to 10, characterized in that one or more layers are produced by a sublimation process.

12. The organic electroluminescent device as claimed in one or more of claims 1 to 10, characterized in that one or more layers are applied by the OPVD (organic physical vapor deposition) process.

13. The organic electroluminescent device as claimed in one or more of claims 1 to 10, characterized in that one or more layers are applied by printing techniques.

14. The organic electroluminescent device as claimed in claim 13, characterized in that the printing technique is the inkjet process.

15. The organic electroluminescent device as claimed in claim 13, characterized in that the printing technique is the LITI process (light-induced thermal imaging).

16. An organic layer for the production of organic electroluminescent devices with the LITI process as claimed in claim 15, comprising at least one hole conductor material and at least one emission material capable of emission, characterized in that at least one of the two materials comprises one or more spiro-9,9'-bifluorene units and the weight ratio of hole conductor material to emission material is from 1:99 to 99:1.